AZ Response to Intervention (RTI)

Data Based Decisions

Data-based decisions refer to an ongoing systemic process of analyzing and evaluating information to inform important educational decisions and actions. Integrated data systems must have effective decision making rules that help identify proven instructional practices. Decision making rules are used to determine which students are or are not making adequate progress on specific skills along with the effectiveness of instruction at each tier. Educators utilize this systematic process to address the needs of individual students, small groups, grade levels, and all students in a school or district. Research has demonstrated that when teachers use progress monitoring data for instructional decision-making purposes:

- students achieve more
- teacher decision making improves
- students tend to be more aware of their performance

(e.g., see Fuchs, Deno, Mirkin, 1984; L. S. Fuchs, Fuchs, Hamlett, & Ferguson, 1992; L. S. Fuchs, Fuchs, Hamlett, & Stecker, 1991; Stecker, Fuchs, & Fuchs, 2005)

At the systems level districts/schools can implement the Outcome Driven Model for RTI Decisions that has been developed in University of Oregon. The key features of the model are:

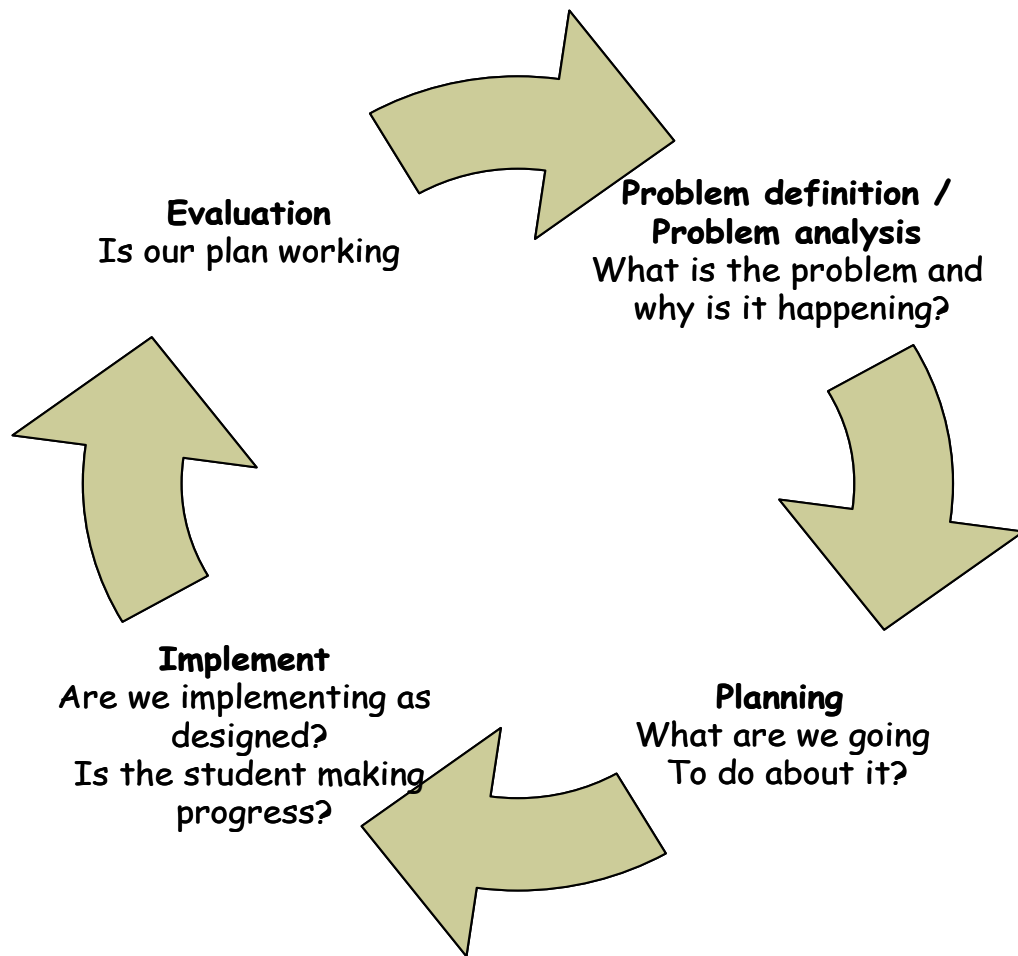| ODM Step	Decisions/Questions	Data
1. Identify Need	Are there students who may need support? How many? Which students?	Screening data (Benchmark data)
2. Validate Need	Are we confident that the identified students need support?	Diagnostic assessment data and additional information as needed
3. Plan and Implement Support	What level of support for which students? How to group students? What goals, specific skills, curriculum/program, instructional strategies?	Diagnostic assessment data and additional information as needed

4. Evaluate and Modify Support	Is the support effective for individual students?	Progress Monitoring data and formative evaluation
5. Evaluate Outcomes	As a school/district: How effective is our core (Tier I) support? How effective is our supplemental (Tier II) support? How effective is our intensive intervention (Tier III) support?	Outcome Assessment information (Benchmark data)

The foundation of this model is the data that drive the evaluation of system-wide effectiveness. It provides a school wide system of increasing support to differentiate instruction with the support based on student needs and progress. Its primary goal is to maximize learning for all students.

At the school and individual student level the **problem-solving process** serves as the overarching structure that drives assessment and intervention activities. Therefore, problem solving lies at the heart of RTI. Problem solving means going beyond fulfilling procedural requirements and checklists to doing what it takes to resolve students' learning problems. The problem-solving model has been organized into a series of four steps and the questions answered by using the process is found in diagram below. These steps are more than procedural formalities and the most essential part of the process is obtaining positive outcomes (and not merely following steps). The steps are the outline of an evidence-based method of investigation and can be organized into a series of questions that educators must answer if they are to improve students' learning opportunities. The questions that drive the process appear in the diagram below. Data is gathered at each step, making it a *data-based problem-solving process* with the goal to make instruction more effective for learners, or "enabling learning" (Tilly, 2005).

A problem solving process includes a series of steps:

- Comparing data with expected benchmarks or goals (Does a problem exist?),
- Analyzing what factors (for example health, curricular, instructional, high ability, emotional, skill gaps, etc.) are contributing to the area(s) of concern (What causes the problem?),
- Developing a plan to address the factors hypothesized for the concern (What can we do to address the problem?), and implementing the developed plan with consistency and as determined necessary (often referred to as fidelity of implementation), and
- Evaluating the impact of the plan and, if needs continue, development of a new plan (Did our intervention or extension work?).

Evaluation
Is our plan working

**Problem definition /
Problem analysis**
What is the problem and
why is it happening?

Planning
What are we going
To do about it?

Implement
Are we implementing as
designed?
Is the student making
progress?

A **standard protocol** is a viable alternative approach to problem solving at Tier II and may be used along with, or in some cases in place of problem solving, to make initial intervention decisions when a student is identified as "at risk" and in need of Tier 2 intervention. Standard treatment protocol is a process where student decisions are made using an established response to regular occurring circumstances. An analogy from medicine is the standard treatment protocol typically used when people have flu-like symptoms: rest and drink plenty of fluids. There is no need initially for additional assessment for a diagnosis or to inform intervention. The patient assesses the results using a thermometer and if the temperature goes down and the patient feels better, it is assumed that it was probably the flu and nothing more is done. In the educational model, an example of a standard treatment protocol response to a student with poor decoding might be Tier 2 group work with other students having the same skill concerns using an evidence-based intervention that targets facility with decoding. Students are monitored for progress (similar to taking a temperature) and if the student improves sufficiently to meet minimum expected proficiency, it is assumed that decoding was the student's problem and the student is exited from intervention. If the student did not improve in decoding after 9-15 weeks, then the problem solving process would begin with more specific assessment about skill deficits that would inform more highly targeted intervention. Going back to the medical example, if a patient's fever and symptoms did

not return to normal within 24-36 hours, the doctor would do more specific assessment to determine if there is another diagnosis and what the treatment should be. Below is an example of **Standard Protocol** model.
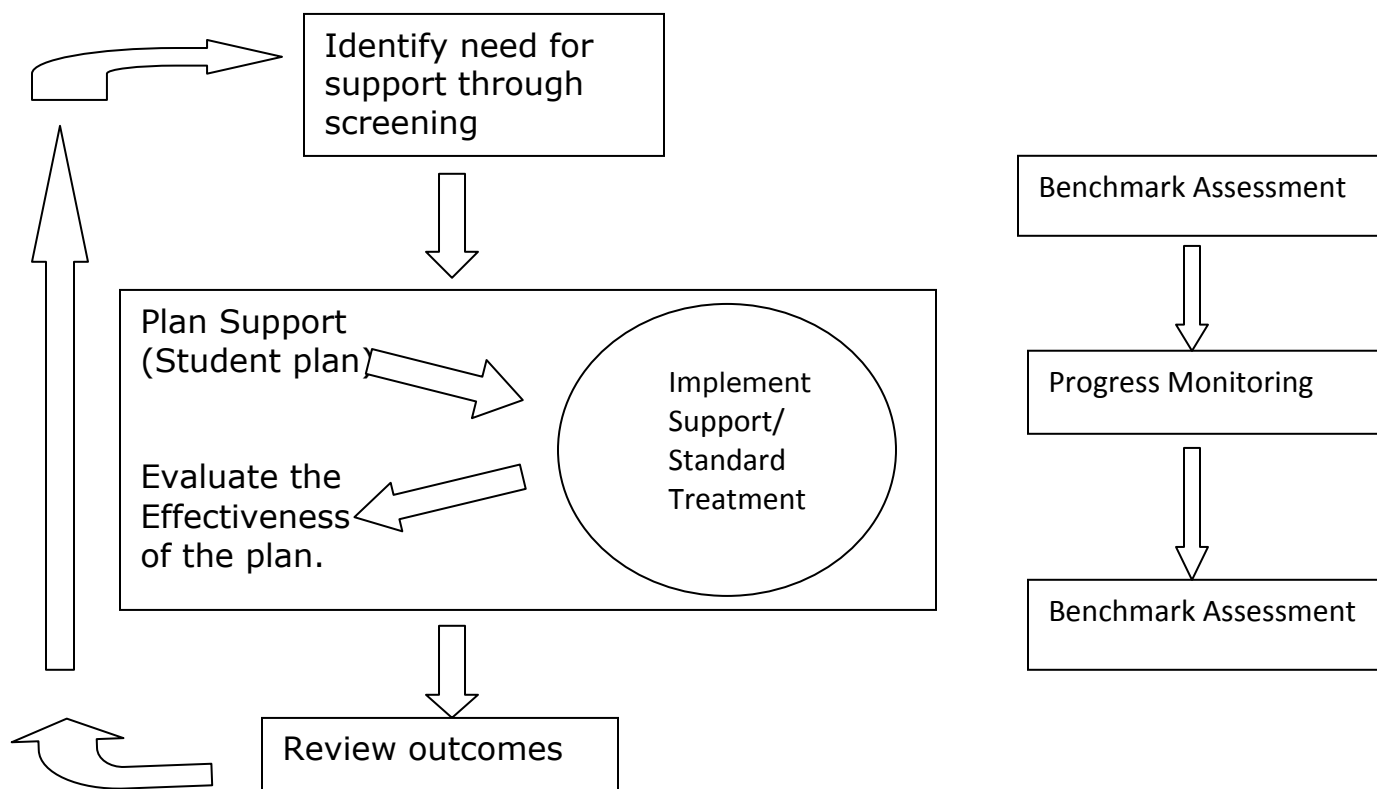
The research supports that both these two models have been widely implemented around the nation. Both models offer strong structures for teams to support student achievement. **The Arizona Department of Education recommends the use of a blended approach to solving student learning issues.** An Idaho study reported by Callender, W.A. (2007), found that in a combination model, students with an intervention plan progressed significantly more in reading than did their counterparts. Combining both approaches will allow schools the flexibility to identify research based and research proven reading, mathematics, and behavioral interventions. Schools will then be able to insert these interventions at each tier of the pyramid. The effectiveness of any problem solving approach will be enhanced by using a common set of interventions to support student achievement.

In both methods when students progress monitoring data points follow their planned aim line we know they are progressing toward their goals. When students data points fall below the aim line for three consecutive assessments or when the students pattern of data points indicate that they are not making adequate progress, the instructional team can quickly change the intervention. If the student's progress monitoring data is far above the aim line, for three consecutive data points, we know that the student is progressing much faster than their goals and the goals need to be adjusted.

In either model data must be stored in a way that allows the instructional team to access, view and compare the students actual progress (trend line) with the planned progress (aim line).

Data based decision help data teams to answer key instructional questions?

- Is the core curriculum effectively meeting student's needs?
- Does a particular intervention work better than another?
- What is the rate of students' skill acquisition?
- Is a student responding positively to an intervention?
- Are the student's goals appropriate?
- Should the student's intervention be changed?
- How many of those students are repeaters within a tier?
- Is Response to Intervention making the educational impact we want?

Throughout the process, the educator records student progress on charts, graphs or other visual displays to examine achievement over time and document students' response to intervention.

In AZ/RTI we have developed a data base that allows Arizona districts to store and analyze data. This has been a two year project in coordination with Arizona's Exceptional Student Services and Mountain Plains Regional Resource Center. Arizona districts are invited to use this exceptional resource.

Link to RTI data base: [WWW.AZ/RTI.com](WWW.AZ/RTI.com)

Field Studies of RTI Effectiveness
Idaho Results-Based Model (RBM) Study Citation
Callender, W. A. (2007). The Idaho results-based model: Implementing response to intervention statewide.